

Title (en)  
DEVICE FOR THE OPTIMUM MATCHING OF A HYBRID CIRCUIT TO A COMMUNICATION LINE

Publication  
**EP 0181469 B1 19881109 (DE)**

Application  
**EP 85112073 A 19850924**

Priority  
DE 3440591 A 19841107

Abstract (en)  
[origin: EP0181469A1] 1. A device for optimally matching a termination to a telephone line, in which the termination (G2), whose 2-way main branch is connected to the telephone line, can be connected at its side opposite the 2-way main branch to a mimic circuit (NB2) of adjustable impedance, the device having a measurement device which can be connected directly to the telephone line (FL), the measurement device containing the following equipment : a) a mimic circuit (NB1) connectable to the termination (G1) at its side opposite to the 2-way main branch and containing a predetermined number of parallel-connected resistors (R1 to R4) and capacitors (C1 to C4), each connected to a switch (SR1 to SR4 and SC1 to SC4), the resistors and capacitors all being enclosed in a plug-in unit (RC) which can be removed from the measurement device (ME) and inserted into a second mimic circuit (NB2) connectable to a second termination (G2) ; b) a micro-computer (MC) connected to the switches (SR1 to SR4 and SC1 to SC4) of the mimic circuit (NB1) and delivering command signals for changing the total impedance of the mimic circuit (NB1) in a predetermined manner ; c) a signal generator (P) in a side-branch (G1a) of the termination (G1) and controlled by the micro-computer (MC) to deliver a test signal of constant signal level to the side-branch (G1a) ; d) a signal receiver (D) in the other side-branch (G1b) of the termination (G1) for measuring the residual portion of the signal level flowing over this side-branch (G1b) in dependence on the termination transition attenuation, and for delivering to the micro-computer (MC), over an analog-to-digital converter (W), a digital control signal depending on the measured residual portion of the signal level ; the micro-computer comparing the levels of each of two successive signals and storing the least level, together with the corresponding total impedance of the mimic circuit (NB1) and calculating the termination transition attenuation ; e) display devices for displaying the least termination transition attenuation and the best value of the total impedance of the mimic circuit (NB1) ; there also being provided devices (S1, S2 or SR1' to SC4') for adjusting or fixing a combination, calculated by the microcomputer (MC), of resistors (R1 to R4) and capacitors (C1 to C4) corresponding to the best value of the total impedance of the mimic circuit (NB1 = NB2).

IPC 1-7  
**H04B 3/03**

IPC 8 full level  
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CPC (source: EP)  
**H04B 1/582** (2013.01)

Cited by  
US6111949A; US5974137A; EP0371468A3; FR2621432A1; US5963638A; US5953412A; US6477250B1; WO9810526A1

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